

## 1. IDENTIFICATION DE OF THE PRODUCT AND OF THE COMPANY

NAME OF THE PRODUCT	<b>LIQUID STRIPPER 5L</b>
CODE	<b>100107</b>
DISTRIBUTOR	BOSSAUTO INNOVA, S.A.
ADDRESS	c/ Thomas Edison 16, Apartado de correos 95
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### 1.1. Relevant identified uses and uses advised against

- Intended uses (main technical functions):
  - Solvent.
- Sectors of use (use as such or as an ingredient in mixtures)
  - Agriculture, forestry, fishery (SU1), industrial, professional.
  - Industrial manufacturing (SU3), industrial.
  - Manufacture of textiles, leather, fur (SU5), industrial, professional.
  - Printing and reproduction of recorded media (SU7), industrial, professional.
  - Manufacture of bulk, large scale chemicals (SU8), industrial.
  - Manufacture of fine chemicals (SU9), industrial.
  - Formulation (mixing) of preparations and/or re-packaging (SU10), industrial, professional.
  - Manufacture of rubber products (SU11), industrial, professional.
  - Manufacture of plastic products (SU12), industrial, professional.
  - Manufacture of other non-metallic mineral products (SU13), industrial, professional.
  - General manufacturing (SU17), industrial, professional.
  - Manufacture of furniture (SU18), industrial, professional.
  - Consumer uses (SU21), consumers.
  - Professional uses (SU22), professional.
  - Scientific research and development (SU24), industrial, professional.
- Use in manufacture, formulation or application processes (relevant uses)
  - Manufacture of the substance, industrial.
  - Distribution of the substance, industrial.
  - Formulation of mixtures and/or re-packaging, industrial.
  - Use as an intermediate, industrial.
  - Use as process solvent (extraction solvent), industrial.
  - Use in textile scouring, industrial, professional.
  - Use in adhesives, sealants, industrial, professional, consumers.
  - Use in coatings, industrial, professional, consumers.
  - Use in cleaning agents, industrial, professional, consumers.
  - Use in personal care products, professional, consumers.
  - Use in surface cleaning, industrial.
  - Use in agrochemical sector, industrial, professional, consumers.
  - Use in functional fluids, industrial.
  - Use in heat transfer fluids, industrial.

- Use of blowing agents in manufacture of foam, industrial.
- Use in laboratory, industrial, professional.

- Use in products (relevant product categories)
  - Adhesives, sealants.
  - Biocidal products.
  - Coating and paints, thinners, paint removers.
  - Heat transfer fluids.
  - Intermediate.
  - Laboratory chemicals.
  - Plant protection products.
  - Washing and cleaning products.
  - Cosmetics, personal care products.
  - Extraction agents.

- Uses advised against

This product is not recommended for any use or sector of use industrial, professional or consume other than those previously listed as "Intended or identified uses". If your use is not covered, please contact the supplier of this material safety data sheet.

- Restrictions on manufacture, placing on market and use, according to Annex XVII of Regulation (EC) n° 1907/2006

Contains dichloromethane: Restricted to industrial use and to professionals approved in certain EU Member States - verify where use is allowed. 1. Paint strippers containing dichloromethane in a concentration equal to or greater than 0,1% by weight shall not be: a) shall not be placed on the market for the first time for supply to the general public or to professionals after 06.12.2010; b) shall not be placed on the market for supply to the general public or to professionals after 06.12.2011; c) shall not be used by professionals after 06.06.2012. 2. By way of derogation from paragraph 1, Member States may allow on their territories and for certain activities the use, by specifically trained professionals, of paint strippers containing dichloromethane and may allow the placing on the market of such paint strippers for supply to those professionals. 3. A professional benefiting from the derogation referred to in paragraph 2 shall operate only in Member States which have made use of that derogation. The training referred to in paragraph 2 shall cover as a minimum: a) awareness, evaluation and management of risks to health, including information on existing substitutes or processes, which under their conditions of use are less hazardous to the health and safety of workers; b) use of adequate ventilation; c) use of appropriate personal protective equipment. Employers and self-employed workers shall preferably replace dichloromethane with a chemical agent or process which, under its conditions of use, presents no risk, or a lower risk, to the health and safety of workers. Professional shall apply all relevant safety measures in practice, including the use of personal protective equipment. 4. Paint strippers containing dichloromethane in concentrations equal to or greater than 0,1% by weight may be used in industrial installations only if the following minimum conditions are met: a) effective ventilation in all processing areas, in particular for the wet processing and the drying of stripped articles, so as to minimize exposure and to ensure compliance, where technically feasible, with relevant occupational exposure limits; b) measures to minimize evaporation from strip tanks; c) measures for the safe handling of dichloromethane in strip tanks; d) appropriate personal protective equipment is available; e) adequate information, instruction and training for operators in the use of such equipment is supplied. The restrictions do not apply to storage, keeping, treatment, filling into containers, or transfer from one container to another of the substances for export. The restrictions do not apply to storage, keeping, treatment, filling into containers, or transfer from one container to another of the substances for export.

## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

- Classification according to Regulation (EC) 1272/2008 – 605/2014 (CLP)

WARNING: Skin Irrit. 2: H315 | Eye Irrit. 2: H319 | Carc. 2: H351 | STOT SE (irrit.) 3: H335 | STOT SE (narcosis) 3: H336 | STOT RE 2: H373oHS.

Danger class	Classification of the mixture	Cat.	Routes of exposure	Target organs	Effects
Physicochemical: Not classified	Skin Irrit. 2 : H315 Eye Irrit. 2 : H319	Cat. 2 Cat. 2	Skin Eyes	Skin Eyes	Irritation Irritation
Human health: 	Carc. 2 : H351 STOT SE (irrit.) 3 : H335	Cat. 2 Cat. 3	.	.	Cancer Irritation
Environment: Not classified	STOT SE (narcosis) 3 : H336 STOT RE 2 : H373oHS	Cat. 3 Cat. 2	Inhalation Ingestion	Respiratory ways CNS Liver, blood	Narcosis Damage

- Classification in accordance with Directive 67/548/EEC-2001/59/EC (DSD)  
Carc. Cat. 3: R40

Full text of hazard statements and risk phrases mentioned is indicated in section 16.

## 2.2. Label elements



This product is labelled with the signal Word DANGER in accordance with Regulation (EC) n. 1272/2008 – 487/2013 (CLP).

### - Hazard statements:

H351 Suspected of causing cancer.

H373oHS May cause damage to liver and blood through prolonged or repeated exposure if swallowed.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

### - Precautionary statements:

P102 Keep out of reach of children.

P260 Do not breathe vapour, spray.

P271 Use only out doors or in a well-ventilated area.

P280F Wear protective gloves, clothing and eye protection. In case of inadequate ventilation wear respiratory protection.

P303+P361+P353-P352-P312 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Call a POISON CENTER or doctor if you feel unwell.

P501b Dispose of contents/container to hazardous or special waste collection point,

### - Supplementary statements:

EUC059 Restricted to industrial use and to professionals approved in certain EU Member States – verify where use is allowed.

### - Hazardous ingredients:

Methylene chloride EC n. 200-838-9

## 2.3. Other hazards

Hazards which do not result in classification but which may contribute to the overall hazards of the mixture.

Other physiochemical hazards: No other relevant adverse effects are known.

Other adverse human health effects: In case of prolonged contact, the skin may become dry.

Other negative environment effects: Do not fulfill the PBT/vPvB criteria.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances


This product is a mono constituent substance.

Chemical description:

Dichloromethane.

CH<sub>2</sub> (Cl) 2.

Ingredients:

50<100% 	Methylene chloride CAS: 75-09-2, EC: 200-838-9 REACH: 01-2119480404-41 DSD: Carc. Cat. 3: R40 CLP: Warning: Skin Irrit. 2: H315   Eye Irrit. 2: H319   Carc. 2: H351   STOT SE (irrit.) 3: H335   STOT SE (narcosis) 3: H336   STOT RE 2: H373oHS	Index No. 602-004-00-3 < ATP12 < REACH
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Impurities:

Does not contain other components or impurities which will influence the classification of the product.

Stabilizers:

None.

Reference to other sections:

For more information on hazardous ingredients, see sections 8, 11, 12 and 16.

Substances of very high concern (SVHC):

# List updated by ECHA on 17/12/2014.

Substances SVHC subject to authorization, included in Annex XIV of Regulation (EC) no. 1907/2006: None

Substances SVHC candidate to be included in Annex XIV of Regulation (EC) no. 1907/2006: None

Persistent, bioaccumulable and toxic PBT, or very persistent and very bioaccumulable vPvB substances: Do not fulfill the PBT/vPvB criteria.

### 3.2. Mixtures


Not applicable.




## 4. FIRST AID MEASURES

### 4.1./4.2. Description of first-aid measures and main symptoms and effects, acute and delayed



Symptoms may occur after exposure, so that in case of direct exposure to the product, when in doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Lifeguards should pay attention to self-protection and use the recommended protective equipment if there is a possibility of exposure. Wear protective gloves when administering first aid.

Route of exposure	Symptoms and effects, acute and delayed	Description of first-aid measures
Inhalation 	The vapours may be irritant and cause dizziness, headache, nausea, vomiting and narcosis. Inhalation may result in pulmonary edema.	Remove the patient out of the contaminated area into the fresh air. If breathing is irregular is unconscious, place in appropriate recovery position.

	Symptoms of pulmonary edema may not often be apparent until after several hours and become worse after physical effort.	Keep the patient warm and at rest until medical attention arrives.
Skin 	Skin contact may cause redness and in case of prolonged contact, the skin may become dry.	Remove immediately clothing. Wash thoroughly the affected area with plenty of cold or lukewarm water and neutral soap, or use a suitable cleanser.
Eyes 	Contact with the eyes produces redness, pain and conjunctivitis.	Rinse eyes copiously by irrigation with plenty of clean, fresh water for at least 15 minutes, holding the eyelids apart, until the irritation is reduced. Remove contact lenses after the first 5 minutes and continue washing. Obtain medical attention without delay, preferably from an ophthalmologist.
Ingestion 	If swallowed, may cause abdominal pain, vomiting, diarrhea, headache and dizziness.	If swallowed, seek medical advice immediately and show container or label. Do not induce vomiting, due to the risk of aspiration. Keep the patient at rest.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician: Specific treatment is necessary in case of exposition with this product: the appropriate means with instructions must be available.

Antidotes and contraindications: Not available.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

Extinguishing powder or CO<sub>2</sub>. In the case of more important fires, also alcohol resistant foam and water spray/mist. Do not use for extinguishing: direct water jet. Direct water jet may not be effective to extinguishing the fire, since the fire may spread.

### 5.2. Special hazards arising from the substance or mixture

Combustible if heated: As consequence of combustion or thermal decomposition, hazardous products may be produced: carbon monoxide, carbon dioxide, halogenated compounds, phosgene, hydrochloric acid. Irritant. Exposure to combustion or decomposition products may be a hazard to health.

### 5.3. Advice for firefighters

Special protective equipment: depending on magnitude of fire, heat-proof protective clothing may be required, appropriate independent breathing apparatus, gloves, protective glasses or face masks and boots. If the fire-proof protective equipment is no available or not used, combat fire from a sheltered position or at a safe distance. The standard EN469 provides a basic level of protection for chemical incidents.

Other recommendations: Cool with water the tanks, cisterns or containers close to sources of heat or fire. Bear in mind the direction of the wind. Do not allow fire-fighting residue to enter drains, sewers or water courses.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Avoid breathing vapours. Use gloves, goggles and adequate protection clothing. Keep people without protection in opposition to the wind direction.

### 6.2. Environmental precautions

Avoid contamination of drains, surface or subterranean water and soil. In the case of large scale spills or when the product contaminates lakes, rivers or sewages, inform the appropriate authorities in accordance with local regulations.

### **6.3. Methods and material for containment and cleaning up**

Contain and mop up spills with non-combustible absorbent materials (earth, sand, vermiculite, diatomaceous earth, etc...). Keep the remains in a closed container.

### **6.4. Reference to other sections**

For contact information in case of emergency, see section 1.

For information on safe handling, see section 7.

For exposure controls and personal protection measures, see section 8.

For subsequent waste disposal, follow the recommendations in section 13.

## **7. HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

Comply with the existing legislation on health and safety at work.

- General recommendations: avoid any type of leakage or escape. Keep the container tightly closed.

- Recommendation for the prevention of fire and explosion risks: although due to its low flammability does not represent a serious risk of fire, all type of measures should be taken in order to avoid any possibility of ignition.

Upper/lower flammability or explosive limits: 12.9 – 22.4 % Volume 25°C

- Recommendations for the preventing of toxicological risks: Do not eat, drink or smoke while handling. After handling, wash hands with soap and water. Use only in well ventilated areas. Due to the high volatility of methylene chloride, vapours disperse widely into the workplace atmosphere, and the STEL can easily be exceeded especially in poorly ventilated areas, such as a garage inspection pits. If the ventilation is inadequate, use independent breathing apparatus. All people present in the work area must be adequately protected. For exposure controls and personal protection measures, see section 8.

- Recommendations for the prevention of environmental contamination: It is not considered a danger to the environment. In the case of accidental spillage, follow the instructions indicated in section 6.

### **7.2. Conditions for safe storage, including any incompatibilities**

Prevent unauthorized access. Keep out of reach of children. Keep away from sources of heat. If possible, avoid direct contact with sunlight. Avoid extreme humidity conditions. In order to avoid leakages, the containers, after use, should be closed carefully and placed in a vertical position. For more information, see section 10.

- Class of store: According to current legislation

- Temperature interval: min. 5°C, max. 30°C (recommended)

- Incompatible materials: keep away from oxidizing agents.

- Type of packaging: according to current legislation. Stainless steel containers. Avoid ordinary steel. Avoid galvanized steel. Avoid copper and its alloys (brass, bronze, etc...). Avoid aluminum and its alloys. Avoid light alloys. Compatibility with plastics is variable, compatibility should be tested before use. Unsuitable coating materials: natural rubber, butyl rubber, ethylene-propylene-diene monomer (EPDM), polystyrene.

- Limit quantity (Seveso III) - Directive 96/82/EC-2003/105/EC:

Not applicable.

### **7.3. Specific end uses**

For the use of this product do not exist particular recommendations apart from that already indicated.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

If a product contains ingredients with exposure limits, may be necessary a personnel monitoring, work place or biological, to determine the effectiveness if the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to EN689, EN14042 and EN482 standard concerning methods for assessing the exposure by inhalation to chemical agents, and exposure to chemical and biological agents. Reference should be also made to national guidance documents for methods for the determination of dangerous substances.

- Occupational exposure limit values (TLV)

AGCIH 2012	Year	TLV-TWA		TLV-STEL		Observations
		Ppm	mg/m <sup>3</sup>	Ppm	mg/m <sup>3</sup>	
Methylene chloride	1996	50	174	-	-	A3

TLV – Threshold Limit Value, TWA – Time Weighted Average, STEL – Short Term Exposure Limit, A3 – Carcinogenic in animals.

- Biological Limit Values

Not established.

- Derived no-effect level (DNEL)

Derived no-effect level (DNEL) is a level of exposure that is considered safe, derived from toxicity data according to specific guidances included in REACH. DNEL values may differ from an occupational exposure limit (OEL) for the same chemical. OEL values may come recommended by a particular company, a government regulatory agency or an organization of experts. Although considered protective of health, the OEL values are derived by a process different of REACH.

Derived no-effect level, workers:

· Systemic effects, acute and chronic:

	DNEL Inhalation mg/m <sup>3</sup>	DNEL Cutaneous mg/kg bw/d	DNEL Oral mg/kg bw/d
Methylene chloride	706 (a) 353 (c)	- (a) 4750 (c)	- (a) - (c)

Derived no-effect level, workers:

· Local effects, acute and chronic:

	DNEL Inhalation mg/m <sup>3</sup>	DNEL Cutaneous mg/cm <sup>2</sup>	DNEL Eyes mg/cm <sup>2</sup>
Methylene chloride	- (a) - (c)	- (a) - (c)	- (a) - (c)

- Derived no-effect level, general population

· Systemic effects, acute and chronic:

	DNEL Inhalation mg/m <sup>3</sup>	DNEL Cutaneous mg/kg bw/d	DNEL Oral mg/kg bw/d
Methylene chloride	353 (a) 88.3 (c)	- (a) 2395 (c)	- (a) 0.0600 (c)

· Local effects, acute and chronic:

	DNEL Inhalation mg/m <sup>3</sup>	DNEL Cutaneous mg/cm <sup>2</sup>	DNEL Eyes mg/cm <sup>2</sup>
Methylene chloride	- (a) - (c)	- (a) - (c)	- (a) - (c)

(a) – Acute, short-term exposure, (c) – Chronic, long-term or repeated exposure.

(-) – DNEL not available (without data of registration REACH).

- Predicted no-effect concentration (PNEC)

Predicted no-effect concentration, aquatic organisms:

· Fresh water, marine water and intermittent release:

PNEC Fresh water mg/l	PNEC Marine mg/l	PNEC Intermittent mg/l

Methylene chloride	0.540	0.194	0.270
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· Wastewater treatment plants (STP) and sediments in fresh and marine water:

	PNEC STP mg/l	PNEC Sediments mg/kg dry weight	PNEC Sediments mg/kg dry weight
Methylene chloride	26.0	4.47	1.61

Predicted no-effect concentration, terrestrial organisms:

· Air, soil and effects for predators and humans:

	PNEC Air mg/m <sup>3</sup>	PNEC Soil mg/kg dry weight	PNEC Oral mg/kg bw/d
Methylene chloride	-	0.583	-

(-) – PNEC not available (without data of registration REACH).

## 8.2. Exposure controls

- Engineering measures



Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these measures are not sufficient to maintain concentrations of vapours below the Occupational Exposure Limits, suitable respiratory protection must be worn.

· Protection of respiratory system: Avoid the inhalation of solvents.

· Protection of eyes and face: It is recommended to dispose of water taps, sources or eyewash bottles with clean water close to the working area.

· Protection of hands and skin: It is recommended to dispose of water taps or sources with clean water close to the working area. Barrier creams may help to protect the exposed areas of the skin. Barrier creams should not be applied once exposure has occurred.

- Occupational exposure controls: Directive 89/686/EEC – 96/58/EC: As a general measure on prevention and safety in the work place, we recommend the use of a basic personal protection equipment (PPE), with the corresponding EC marking. For more information on personal protective equipment (storage, use cleaning, maintenance, type and characteristics of the PPE, protection class, marking, category, CEN norm, etc...), you should consult the informative brochures provided by the manufacturers of PPE.

· Mask:



A-type filter mask (brown) for gases and vapours of organic compounds with a boiling point higher than 65°C (EN14387). Class 1: low capacity up to 1000 ppm, Class 2: medium capacity up to 5000 ppm, Class 3: high capacity up to 10000 ppm. In order to obtain a suitable protection level, the filter class must be selected depending on the type and concentration of the contaminating agents present, in accordance with the specifications supplied by the filter producers. The respiratory equipment with filters does not work satisfactorily when the air contains high concentrations of vapour or oxygen content less than 18% in volume. In presence of high concentrations of vapour, use independent breathing apparatus.

· Goggles:





Safety goggles designed to protect against liquid splashes, with suitable lateral protection (EN 166). Clean daily and disinfect at regular intervals in accordance with the instructions of the manufacturer.

· Face shield:

No.

· Gloves:



Solvent-resistant gloves (EN374). When it can be a repeated or prolonged contact, it is recommended to use gloves with a protection level 5 or higher, with a breakthrough time >240 min. When you only expect a short contact, it is recommended to use gloves with a protection level 2 or higher, with a breakthrough time >30 min. The breakthrough time of the selected glove material should be in accordance with the pretended period of use. There are several factors (for example, temperature), they do in practice the period of use of a protective gloves resistant against chemicals is clearly lower than the established standard EN374. Due to the wide variety of circumstances and possibilities, we must have in mind the manual of instructions from manufacturers of gloves. Use the proper technique of removing gloves (without touching glove's outer surface) to avoid contact of the product with the skin. The gloves should be immediately replaced when any sign of degradation is noted.

· Boots:

No.

· Apron:

Advisable.

· Clothing:

Advisable.

· Thermal hazards:

Not applicable (the product is handled at room temperature).

- Environmental exposure controls:

Avoid any spillage in the environment. Avoid any release into the atmosphere.

· Spills on the soil:

Prevent contamination of soil.

· Spills in water: Do not allow to space into drains, sewers or water courses.

· Emissions to the atmosphere: Because of volatility, emissions to the atmosphere while handling and use may result, in special when it is used as a solvent. Avoid any solvent release into the atmosphere.

· VOC (industrial installations): If product is used in an industrial installation, it must be verified if it is applicable the Directive 1999/13/EC, on the limitation of emissions of volatile compounds due to the use of organic solvents in certain activities and installations: Solvents: 100% Weight, VOC (supply): 100% Weight, VOC: 14.1% C (expressed as carbon), Molecular weight (average): 84.9, Number C atoms (average): 1.0, VOC CMR Cat. 3 (halogenated): 100%.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	250 ppm

pH:	Neutral organic substance.
Melting point:	-96.7°C
Initial boiling point:	39.7°C at 760 mmHg
Vapour density:	2.93 at 20°C 1 atm. Relative air
Relative density:	1.323 at 20/4°C Relative water
Decomposition temperature:	120°C
Dynamic viscosity:	0.44 cps 20°C
Kinematic viscosity:	0.11 mm <sup>2</sup> /s at 40°C
Evaporation rate:	# 895.3 nBuAc= 100 25°C Relative
Vapour pressure:	356.2 mmHg at 20°C 144.3 kPa at 50°C
Solubility in water:	13.1 g/l at 20°C
Solubility in oils and fats:	Not available
Partition coefficient: n-octanol/water:	1.25 (as log Pow)
Flash point:	Not flammable
Upper/lower flammability or explosive limits:	12.9 – 22.4% Volume 25°C
Autoignition temperature:	Not applicable
Explosive properties:	In the molecule there is no chemical groups associated with explosive properties.
Oxidizing properties:	Not classified as oxidizing product.

## 9.2. Additional information

Molecular weight (numeric):	84.94 g/mol MWn
Surface tension:	26.5 din/cm at 20°C
Heat of combustion:	1257 Kcal/kg
Halogenated hydrocarbons:	100 % Weight
VOC (supply):	100 % Weight 1323.9 g/l

The values indicated do not always coincide with product specifications. The data for the product specifications can be found in the technical data sheet of the same. For additional information concerning physical and chemical properties related to safety and environment, see sections 7 and 12.

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

- Corrosive to metals: It is not corrosive to metals.
- Pyrophoric properties: It is not pyrophoric.

### 10.2. Chemical stability

Stable under recommended storage and handling conditions.

### 10.3. Possibility of hazardous reactions

Possible dangerous reactions with oxidizing agents. The product attacks plastic, rubber and coatings.

### 10.4. Conditions to avoid

Heat: Keep away from sources of heat.

Light: Keep in the dark. Slowly decomposes under the influence of air and light, even container is closed.

Air: Not applicable.

Humidity: Avoid extreme humidity conditions.

Pressure: Not applicable.

Shock: Not applicable.

### 10.5. Incompatible materials

Keep away from oxidizing agents.

### 10.6. Hazardous decomposition products

As consequence of thermal decomposition, hazardous products may be produced: hydrochloric acid, halogenated compounds.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

- Acute toxicity

Dose and lethal concentrations:

	DL50 (OECD 401) mg/kg oral	DL50 (OECD 402) mg/kg cutaneous	CL50 (OECD 403) mg/m <sup>3</sup> 4h inhalation
Methylene chloride	1410 Rat	>2000 Rat	>52000 Rat







No observed adverse effect level: Not available.

Lowest observed adverse effect level: Not available.

- Information on likely routes of exposure: Acute toxicity

Routes of exposure	Acute toxicity	Cat.	Main effects, acute and/or delayed
Inhalation: Not classified	CL50 >52000 mg/m <sup>3</sup>	-	Not classified as a product with acute toxicity if inhaled (based on available data, the classification criteria are not met).
Skin: Not classified	DL50 >2000 mg/kg	-	Not classified as a product with acute toxicity in contact with skin (based on available data, the classification criteria are not met).
Eyes: Not classified	Not available	-	Not classified as a product with acute toxicity by eye contact (lack of data).
Ingestion: Not classified	DL50 1410 mg/kg	-	Not classified as a product with acute toxicity if swallowed (based on available data, the classification criteria are not met).







- Corrosion/irritation/sensitisation

Danger class	Target organs	Cat.	Main effects, acute and/or delayed
Respiratory corrosion/irritation: 	Respiratory ways 	Cat. 3	IRRITANT: May cause respiratory irritation.
Skin corrosion/irritation 	Skin 	Cat. 2	IRRITANT: Causes skin irritation.
Serious eye damage/irritation: 	Eye 	Cat. 2	IRRITANT: Causes serious eye irritation.
Respiratory sensitisation: Not classified	-	-	Not classified as a sensitizing product by inhalation (based on available data, the classification criteria are not met).
Skin sensitization: Not classified	-	-	Not classified as a sensitizing product by skin contact (based on available data, the classification criteria are not met).

- Aspiration hazard:

Danger class	Target organs	Cat.	Main effects, acute and/or delayed
Aspiration hazard: Not classified.	-	-	Not classified as a hazardous product by aspiration (based on available data, the classification criteria are not met).

- Specific target organs toxicity (STOT): Single exposure (SE) and/or Repeated exposure (RE):

Effects SE/RE	Target organs	Cat.	Main effects, acute and/or delayed
Hematologic: RE 	Blood 	Cat. 2	HARMFUL: May cause damage to blood through prolonged or repeated exposure if swallowed.
Hepatic: RE 	Liver 	Cat. 2	HARMFUL: May cause damage to liver through prolonged or repeated exposure if swallowed.
Neurological: SE 	SNC 	Cat. 3	NARCOTIC: May cause drowsiness or dizziness if inhaled.

- CMR Effects

- Carcinogenic effects: ingredients which can cause cancer: methylene chloride (cat. 2).
- Genotoxicity: is not considered as a mutagenic product.
- Toxicity for reproduction: do not harm fertility. Do not harm the fetus developing.
- Effects via lactation: Not classified as a hazardous product for children breast-fed.

- Delayed and immediate effects as well as chronic effects from short and long-term exposure

- Routes of exposure: may be absorbed by inhalation of vapour, through the skin and by ingestion.
- Short-term exposure: may irritate the eyes and skin. Some symptoms may not be immediate.
- Long-term or repeated exposure: repeated or prolonged contact may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. May have an adverse effect on the liver and on the kidneys. Also causes disturbances of the central nervous system.

- Interactive effects:  
Not available.

- Information about toxicokinetics, metabolism and distribution
- Dermal absorption: Not available.
- Basic toxicokinetics: Not available.

- Additional information:

Methylene chloride is harmful by inhalation. Continued or high exposures by inhalation will produce anesthetic effects; this may result in unconsciousness and could prove fatal. Repeated exposure to high levels of methylene chloride may produce adverse effects on the liver and kidneys.

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

- Acute toxicity in aquatic environment for individual ingredients:

	CL50 (OECD 203) mg/l 96 horas	CE50 (OECD 202) mg/l 48 horas	CE50 (OECD 201) mg/l 72 horas
Methylene chloride	193 Fishes	109 Daphnia	660 Algae

- Not observed effect concentration:  
Not available.

- Lowest observed effect concentration:  
Not available.

## 12.2. Persistence and degradability

Biodegradability: readily biodegradable.

- Aerobic biodegradation for individual ingredients:

	DQO mgO <sub>2</sub> /g	% DBO <sub>5</sub> /DQO 5 days 14 days 28 days	Biodegradability
Methylene chloride		> 70	Easy

Hydrolysis: Hydrolysis is not an important degradation process under normal environment conditions.

Photodegradability: Because of indirect photochemical reactions, it is oxidized in the atmosphere mainly in contact with hydroxyl radicals, under the influence of sunlight. Atmospheric degradation is anticipated in some weeks.

## 12.3. Bioaccumulative potential

It is unlikely to bioaccumulate.

- Bioaccumulative for individual ingredients:

	Log Pow	BCF L/kg	Potential
Methylene chloride	1.25	5.0 (calculated)	Unlikely, low

## 12.4. Mobility in soil

It is not foreseeable the absorption in the solid phase of the terrain.

## 12.5. Results of PBT and vPvB assessment

Annex XIII of Regulation (EC) n.1907/2006: Does not contain substances that fulfill the PBT/vPvB criteria: Half-life in the marine environment <60 days, Half-life in fresh-water or estuarine <40 days, Half-life in marine sediments <180 days, Half-life in sediments of fresh-water of estuarine <120 days, Half-life in the soil <120 days, Bioconcentration factor BCF <2000, Long term 'No observed effect concentration' of fresh-water or marine organisms NOEC > 0.01 mg/l, it is NOT classified as CMR, it has NO endocrine disrupting potential.

## 12.6. Other adverse effects

- Ozone depletion potential: It is not considered particularly dangerous for the ozone layer. Substance not included in Annex I of Regulation (EC) n° 2037/2000 on ozone depletion substances.
- Photochemical ozone creation potential: Because this substance does not absorb UV radiation >290 nm. does not degrade by direct photolysis in the troposphere, and consequently scarcely contributes to the formation of ozone in the troposphere.
- Earth global warming potential: negligible.
- Endocrine disrupting potential: No.

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Directive 2008/98/EC:

Take all necessary measures to prevent the production of waste whenever possible. Analyze possible methods for revaluation or recycling. Dispose of this material and its container to hazardous or special waste collection point. Do not discharge into drains or the environment, dispose of at an authorized waste collection point. Waste should be handled and disposed of in accordance with current local and national regulations. For exposure controls and personal protection measures, see section 8.

- Disposal of empty containers:

Directive 94/62/EC – 2005/20/EC, Decision 2000/532/EC

Emptied containers and packaging should be disposed of in accordance with currently local and national regulations. With contaminated containers and packaging, adopt the same measures as for the product in itself. Emptied containers may retain product residues and

vapours. Keep empty containers tightly closed. Never remove labels from containers until they have been cleaned. Ensure the container is completely empty before throwing it away.

- Procedures for neutralizing or destroying the product  
Controlled incineration in special facilities for chemical waste, but in accordance with local regulations.

## 14. TRANSPORT INFORMATION

**14.1. UN NUMBER:** 1593

### 14.2. UN proper shipping name

Dichloromethane.

### 14.3./14.4. Transport hazard class(es) and packaging group

Transport by road (ADR 2013) and transport by rail (RID 2013):



- Class: 6.1
- Packaging group: III
- Classification code: T1
- Tunnel restriction code: (E)
- Transport category: 2, max. ADR 1.1.3.6. 333L
- Limited quantities: 5L (see total exemptions ADR 3.4)
- Transport document: Consignment paper
- Instructions in writing: ADR 5.4.3.4

Transport by sea (IMDG 36-12):



- Class: 6.1
- Packaging group: III
- Emergency Sheet (EmS): F-A, S-A
- First Aid Guide (MFAG): 340
- Marine pollutant: No
- Transport document: Shipping bill of lading.

Transport by air (ICAO/IATA 2013):



- Class: 6.1
- Packaging group: III
- Transport document: Air bill of lading.

Transport by inland water ways (ADN): Not available.

### 14.5. Environmental hazards

Not applicable (not classified as hazardous for the environment).

### 14.6. Special precautions for user

Ensure that persons transporting the product know what to do in case of accident or spill. Always transport in closed containers that are in a vertical position and sure. Ensure adequate ventilation.

## 14.7. Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

Type of ship: 3, Contamination category: Y

## 15. REGULATORY INFORMATION

### 15.1. EU safety, health and environmental regulations/legislation specific

The regulations applicable to this product generally are listed throughout this material safety data sheet.

- Restrictions on manufacture, placing on market and use: see section 1.2.
- Control of the risks inherent in major accidents (Seveso III): see section 7.2.
- Tactile warning of danger: If the product is intended for the general public, is mandatory a tactile warning of danger. The technical specifications for tactile warning devices shall conform with EN ISO standard 11683 relating to 'Packaging-Tactile warnings of danger – Requirements'.
- Child safety protection: If the product is intended for the general public, is required a child-resistant fastening. Child-proof fastenings used on reclosable packages shall comply with ISO standard 8317 relating to 'Child resistant packages – Requirements and methods of testing for reclosable packages'. Child-proof fastenings used on non-reclosable packages shall comply with CEN standard EN 862, relating to 'Packaging – Child-resistant packaging – Requirements and testing procedures for non-reclosable packages for non-pharmaceutical products.
- Other regulations: not available.

### 15.2. Chemical safety assessment

For this product has been carried out a chemical safety assessment.

## 16. OTHER INFORMATION

### 16.1. Text of the phrases and notes referenced in sections 2 and/or 3

Hazard statements according to the Regulation (EC) n. 1272/2008 – 790/2009 (CLP), Annex III:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May causes drowsiness or dizziness.

H351 Suspected of causing cancer.

H373oHS May cause damage to liver and blood through prolonged or repeated exposure if swallowed.

R-phrases according the Directive 67/548/EEC-2001/59/EC (DSD), Annex III:

R40 Limited evidence of a carcinogenic effect.

Advices on any training appropriate for workers:

It is recommended for all staff that will handle this product to carry out a basic training in occupational risk prevention, in order to provide understanding and interpretation of material safety data sheets and labelling of products as well.

- Main literature references and sources for data:

- Access to European Union Law, <http://eur-lex.europa.eu/>
- Industrial Solvents Handbook, Ibert Mellan (Noyes Data Co., 1970).
- Threshold Limit Values, (AGCIH, 2012).
- European agreement on the international carriage of dangerous goods by road, (ADR 2013).
- International Maritime Dangerous Goods Code IMDG including Amendment 36-12 (IMO, 2012).

- Abbreviations and acronyms:

List of abbreviations and acronyms that can be used (but not necessarily used) in this material safety data sheet:

- REACH: Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals.
- DSD: Dangerous Substances Directive.
- DPD: Dangerous Preparations Directive.
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals of the United Nations.
- CLP: European Regulation on Classification, Labelling and Packaging of substances and chemical mixtures.
- EINECS: European Inventory of Existing Commercial Chemical Substances.
- ELINCS: European List of Notified Chemical Substances.
- CAS: Chemical Abstracts Service (Division of the American Chemical Society).
- UVCB: Substances of Unknown or Variable composition, complex reaction products or biological materials).
- SVHC: Substances of Very High Concern.
- PBT: Persistent, bioaccumulable and toxic substances.
- vPvB: Very persistent and very bioaccumulable substances.
- VOC: Volatile Organic Compounds.
- DNEL: Derived No-Effect Level (REACH).
- PNEC: Predicted No-Effect Concentration (REACH).
- LD50: Lethal dose, 50 percent.
- LC50: Lethal concentration, 50 percent.
- UN: United Nations Organization.
- ADR: European agreement concerning the international carriage of dangerous goods by road.
- RID: Regulations concerning the international transport of dangerous goods by rail.
- IMDG: International Maritime code for Dangerous Goods.
- IATA: International Air Transport Association.
- ICAO: International Civil Aviation Organization.

- Material safety data sheet regulations

Material Safety Data Sheet in accordance with Article 31 of Regulation (EC) n. 1907/2006 (REACH) and Annex I of Regulation (EU) n. 453/2010.

The information of this Material Safety Data Sheet, is based on the present state of knowledge and on current UE and national laws, as the users' working conditions are beyond our knowledge and control. The product is not to be used for other purposes than those specified, without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this Material Safety Data Sheet is meant as a description of the safety requirements of the product and it is not to be considered as a guarantee of the product's properties.